

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

HN3C09F

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

Unit in mm

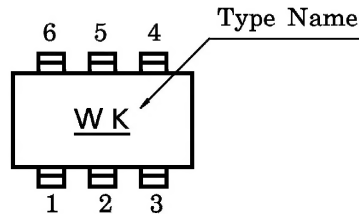
- Including Two Devices in SM6 (Super Mini Type with 6 Leads)

MAXIMUM RATINGS (Ta = 25°C)

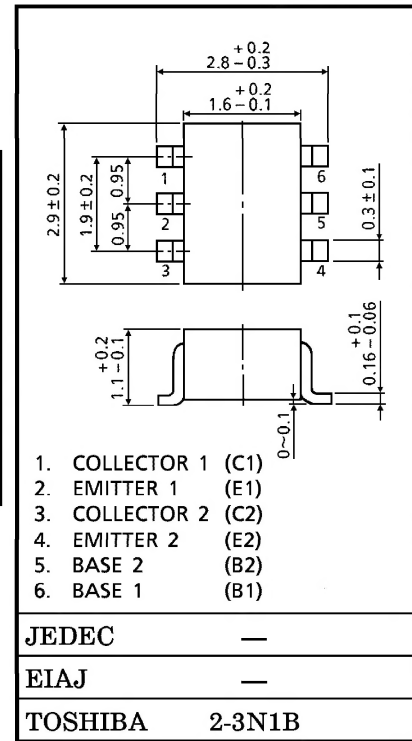
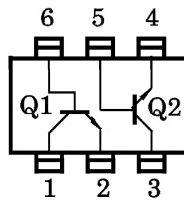
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	20	V
Collector-Emitter Voltage	V _{CEO}	12	V
Emitter-Base Voltage	V _{EB0}	3	V
Base Current	I _B	15	mA
Collector Current	I _C	30	mA
Collector Power Dissipation	P _C *	300	mW
Junction Temperature	T _j	125	°C
Storage Temperature Range	T _{stg}	-55~125	°C

* : Total

MARKING



PIN ASSIGNMENT (TOP VIEW)



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CBO}	V _{CB} = 10V, I _E = 0	—	—	1	μA
Emitter Cut-off Current	I _{EB0}	V _{EB} = 1V, I _C = 0	—	—	1	μA
DC Current Gain	h _{FE}	V _{CE} = 5V, I _C = 10mA	80	—	240	—
Transition Frequency	f _T	V _{CE} = 5V, I _C = 10mA	5	7	—	GHz
Insertion Gain	S _{21e} ²	V _{CE} = 5V, I _C = 10mA, f = 1GHz	8	11.5	—	dB
Noise Figure	NF	V _{CE} = 5V, I _C = 3mA, f = 1GHz	—	1.1	2	dB
Reverse Transfer Capacitance Q1	C _{re}	V _{CB} = 5V, I _E = 0, f = 1MHz (Note)	—	0.45	0.9	pF
Reverse Transfer Capacitance Q2	C _{re}		—	0.4	0.85	pF

(Note) C_{re} is measured by 3 terminal method capacitance bridge.

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